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ABSTRACT

The shift from traditional classroom education to computer-mediated distance learning poses enormous challenges to instructors and learners. The concept of the classroom where students meet to interact with other learners and the instructor no longer exists. Learners lack a natural social outlet to engage with other learners thus leading to feelings of isolation. This paper presents strategies and rationales for implementing certain instructional techniques to move a class from cohort to community. The context is the new Distance Master's program in Instructional Systems Technology at Indiana University. The paper gives suggestions for instructional and non-instructional strategies that have students interacting at the levels of discussion, cooperation and collaboration. These strategies are cross-indicated with their intended outcomes, that is, strengthening the feeling of community as defined by a set of characteristics, which are adopted from Schwier (in press). Suggestions for evaluation techniques are also presented, as are questions for further research. (Contains 35 references.) (Author/AEF)

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Strategies for Creating and Supporting a Community of Learners

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Abstract

This paper presents strategies and rationales for implementing certain instructional techniques to move a class from cohort to community. The context is the new Distance Master's program in Instructional Systems Technology at Indiana University. The authors give suggestions for instructional and non-instructional strategies that have students interacting at the levels of discussion, cooperation and collaboration. These strategies are cross-indicated with their intended outcomes, that is, strengthening the feeling of community as defined by a set of characteristics, which are adapted from Schwier (in press). Suggestions for evaluation techniques are also presented, as are questions for further research.

Introduction

The shift from traditional classroom education to computer-mediated distance learning poses enormous challenges to instructors and learners. The concept of the classroom where students meet to interact with other learners and the instructor no longer exists. The instructor can no longer "look" around the room to see if students are attending to the material, bored or confused. Learners lack a natural social outlet to engage with other learners thus leading to feelings of isolation. The learner is now engaged with the computer instead of other learners. The big question for our project is "How do we structure the course design so learners have mechanisms to connect with each other and form community." How do we overcome the characteristics of the medium so that learners feel connected to the instructor and other learners?

The literature on effective teaching and learning promotes several "big ideas" that we used as foundations for our recommendations. These include Vygotsky's (1978) social development theory and the Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987). Vygotsky's social development theory states that social interaction is vital to cognitive development; all higher-order functions originate as the relationships among individuals. To scaffold learning we must require learners to interact with the content, the teacher and each other. Our strategies focus on promoting communication, social interaction and participation. Many of the principles, theories and strategies we encountered reflect the Seven Principles of Good Practice in Undergraduate education (Chickering & Gamson, 1987). At their core, each of the seven principles focuses on interaction. In 1996, Moore and Kearsley described three types of interactions that are necessary in distance education: learner to learner, leaner to content and learner to instructor. We would argue that these three types of interaction are necessary in education regardless of where or how it takes place.

Characteristics of Community

There is much discussion of learning communities, communities of practices, and virtual or online (social) communities. Although each type of community has its distinct characteristics and requirements, there are many things they share in common. What we are endeavoring to create will be a combination of all of the aforementioned communities: a community of practice (since our cohort will be from the same company) that is involved in mutual learning online. Because of these special characteristics, some things do not apply. For example, there is much talk in the virtual community literature about attracting members and defining the community based on common interests. In our case, this cohort is thrown together and "forced" to form community. Outside members are not encouraged to participate, mainly because the common interest in this case is "taking the Distance Masters in IST from IUB." In a terrestrial community of practice, members might see each other at work, or meet in person once a week to deal with issues in their work lives. This will not exactly be the case for our community; although they will

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probably have some work issues in common, they are not a group of "teachers" or "nurses" or "engineers" who share vast amounts of experience and knowledge. Unlike an informal learning community, which spins itself from nothing and is based on a variety of people coming together for informal learning purposes and where the direction of both the learning and the community is malleable, our learning community will exist within strict parameters of this coursework. Obviously, members will be encouraged to bring other experiences and knowledge to bear on their coursework, but at the end of the day, the learning in question will be much more restricted than an informal learning community.

Selznik (1996) identifies seven elements of community: *history, identity, mutuality, plurality, autonomy, participation,* and *integration*. With respect to virtual learning communities, Schwier (in press) adds: an *orientation to the future, technology,* and *learning*. Some of these characteristics of community will be present from the beginning. Others, the cohort will have to grow into. We will describe the features of these 10 characteristics, and discuss how we will use them for our purposes.

Selznik notes that communities are stronger when their members share history and culture, rather than simply abstract general interests. Unlike an established terrestrial community, the nascent community forming from the distance education masters program will not have a shared *history*. Their history, like their identity, will have to grow and develop through their interactions with each other.

We believe that a shared sense of *identity* will develop in this cohort, and will strengthen their communal identity. Schwier's suggested strategies for fostering identity include team-building exercises, developing community logos, and public acknowledgement of individual and group accomplishments within the community. He also notes the importance of articulating the "focus or purpose of the community" and outlining the requirements and rituals. The structure of the courses allows for frequent and obvious reiteration of community focus, and events such as orientation can help the group define its own rituals and norms.

The very fundamentals of a learning community require interdependence and reciprocity, what Selznik terms *mutuality*. Since our focus is on cooperative and collaborative learning, this mutuality will develop naturally. Schwier also recommends asking "leading questions that encourage members of the community to invest in concerns held by other members, and to share ideas and possible solutions" (p. 5). This type of interaction can be encouraged at course-level in the class forum, and on a social level in the Online Café.

We combined Selznik's terms *history, mutuality,* and *identity* into a larger category called *group identity*. By combining these three concepts we emphasize the fundamental importance of group identity in fostering community. Although one of our goals in the next few semesters is to help students begin to construct a history relevant to their community, this is not something that can be imposed upon the group from outside. It has to grow from the sharing of each individual's history and the links that the learners form with each other based on their experiences. These links are characterized by interdependence and reciprocity, in other words mutuality. Group identity results from this history and mutuality, and from making the budding community history public and available to all, especially newcomers.

Plurality, according to Selznik, results when many different types of interactions amongst members of a community occur, often rooted by individuals' membership in other communities (work, neighborhood, church, etc.) that intersect. We replaced *plurality* with *social interaction*. Given a virtual community, one that to some extent is externally imposed, the opportunities for plurality are limited compared to those available to geographic communities. By providing opportunity for and the expectation of social interaction among participants, we purport the program will provide the plurality needed.

Autonomy of individual members within the community, especially within an academic setting, is important to foster. We will encourage thoughtful, personal postings within the forum, to avoid group-think and "me too, I agree" contributions. Students will receive basic instruction on netiquette and will be encouraged to continually address evolving group norms to maintain respectful communication and to build consensus. We use *individual identity* in place of *autonomy* to underscore the importance of both group and individual identities within a virtual learning environment.

In the case of a virtual community, *participation*, both social and academic, is integral. Without active participation in discussions and other class activities, the learner is not part of the community; indeed, the learner does not even "exist." This is one core distinction between being a passive member of a physical community where you are seen and your presence is noted and registered in the minds of others. In a virtual community, you must make a concerted effort to communicate with others in order to exist. At the same time, allowances must be made for learners to shape the participation, both in structure (number/kind of postings) and in content (managing the discussion of subjects interesting to them).

The *future orientation* of a learning community can operate at a number of different levels. A stronger community bond will be formed when a particular cohort goes through a number of courses together, moving

toward their finishing the program and earning a degree. It can be argued that a learning community can develop within the constraints of a single four-month course, but it is much more likely that students will form long-lasting academic and social bonds throughout an entire program. Visioning exercises and direction of learning activities (having participants describe how what they learned will help them in future learning and in their work) can also give the community a focus on the future. In our case, the community's view of the future may be limited to the two or three years they spend in the program. However, it is possible that they will continue to maintain community ties once they have earned they degrees and are working again. It is also possible that members of the Fall 2000 community would end up wanting to remain part of the Distance Masters community after they graduate, and would like to integrate themselves with the new incoming cohorts. This may pose particular problems of negotiation and fit; is there a role for graduated members to "return" virtually and engage with students working through the program?

Schwier notes that "the *nature of the learning* can be broadly defined and contextual"(p. 4) but is a necessary part of a virtual learning community. For our purposes, the learning involved is more specific and structured; the cohort moves through a set of core courses together, in a particular order. Our goal is to foster community among them before they finish the first year, so that although they will go on to take other courses with other distance learners, they will not only maintain ties with their initial cohort community, but will also have learned the foundations of virtual community creation and will use these skills in other classes. We have changed Schwier's term *learning* to *knowledge generation*.

According to Schwier, "communities are built or dismantled by those in the communities, not by the people organizing or managing them" (p. 2). As they mature, communities define their own social rules of conduct and select their own leaders, assuming *ownership* of their governance and norms. Learning communities, note Palloff and Pratt (1999), exhibit evidence of socially constructed meaning, willingness to critically evaluate the work of others, again assuming ownership of their knowledge creation and sharing.

Integration of all of these elements is necessary for a strong community. Schwier suggests creating belief statements and evolving group norms, and adhering to a learner-centered philosophy that "supports individual expression while building a group identity" (p. 5).

Finally, *technology* is an important consideration for us: although it is thanks to certain technologies that virtual community-building is even possible, there are certain limitations put upon the group because of technology. Although it is the conduit for discourse, it can also exclude or discourage people. Tools that are complicated, unavailable for a certain platform, that are slow and cumbersome can all render the discussion process less than ideal, and members who do not actively participate essentially leave the community. Although Schwier recommends using technology compatible with older, less costly equipment to render the community more inclusive, this is not a concern for us.

Based on Selznik's (1996) seven characteristics and Schwier's (in press) additional three characteristics of community, we have assembled the aforementioned six key elements of community. From these elements, we define community as: a group of people who are brought together to share and generate knowledge in a mutually supportive and reciprocal manner. Its characteristics are ownership, social interaction, group identity, individual identity, participation, and knowledge generation. Furthermore, integration of all of these elements is necessary for a strong community.

Having defined some of the particular characteristics of a virtual community, we will now turn to some basic strategies for creating community. Palloff and Pratt (1999) recommend these steps:

- Clearly define the purpose of the group
- Create a distinctive gathering place for the group
- Promote effective leadership from within.
- Define norms and a clear code of conduct.
- Allow for a range of member roles.
- Allow for and facilitate subgroups.
- Allow members to resolve their own disputes (p. 24)

In our case, many of these steps are automatic, but they should still be given careful consideration. For example, the general purpose of the community is defined as "the Fall 2000 cohort for the IST Distance Masters program." However, instructors or organizers may have more specific goals and purposes from the beginning, and even if they do not, other purposes may emerge from the community throughout the term. Pallof and Pratt (1999), surprisingly, do not put much emphasis on the communicative aspect of community without which a virtual learning community cannot exist.

We feel that one of the most important indicators of a learning community is the first: when students communicate not only on an academic level but on a personal level. Working together towards the goals of the course is what they are "supposed" to be doing. When they begin to talk about their personal lives (families, hobbies, jobs), their triumphs and trials with being a distance student (scheduling, technical problems, disagreement with pedagogy), when they seek each other's counsel for other areas of their life (job change, which elective course to take next, family issues), this is the point at which we feel they are comfortable as a community. There is a good chance that not everyone will be everyone else's best friend. However, when a majority of the members feel they are in a safe enough space to "speak up" about things in the public forum, rather than in individual e-mail messages, then this is evidence of a successful community. There may be a few members of the community who do not feel that the Online Café is an appropriate place to discuss non-academic subjects, and it is the role of the mentor and the community members to make the Café a welcoming place for this type of discussion. As in every type of community, there will be some people who opt out of certain discussions, or even out of all "non-official" discussion, but this is quite normal. There will probably be smaller communities within the larger online class, people who form bonds and discuss the course work and their lives, but not on the general forum. These differences can appear for a variety of reasons; Eastmond (1995) found divisions on age, gender, experience, and learning style lines. However, he also found that the groups often transcended age and gender, for example, two characteristics that might, in a traditional classroom, be impediments.

The final step in creation of an online community is to evaluate whether a community has formed, and if so, in what ways has the community aspect contributed to learning. Our project will address methods for performing the first evaluation of whether community has formed.

Definitions

We will examine ways to use certain instructional strategies to work to move the cohort toward a community. We suggest encouraging interaction at three levels: discussion, cooperation, and collaboration.

Cohort

The cohort is the group of students going through the core classes as a group. They may have an initial connection, such as a common employer, but it does not necessarily constitute a strong bond.

Discussion

Discussion is the basic means of communication in an online format. Students must participate in discussion to have any sort of presence in the class whatsoever. Discussion can be focused around readings, lectures, and any other ideas based on course content or course administration. Discussion can occur asynchronously in the SSF or via e-mail, or synchronously via chat rooms or telephone.

Cooperation

Cooperation entails students working in groups or otherwise dividing up tasks. A machine metaphor can illustrate cooperation in the classroom: different parts of the machine perform different functions and goals, but work together towards a similar end. For example, students may divide up a project, but are eventually assigned individual grades for their work. Examples of cooperative tasks include: dividing up sections of a report to write and doing peer review of each other's work.

Collaboration

Collaboration is the most integrated form of group work, and is therefore potentially the most difficult and the most rewarding. In the case of collaboration, the group members work toward a common goal, one that carries a mutual investment. For example, students may each work on every part of the report, consulting each other and re-reading each other's edits. They are invested in every part of the project because they will share a common grade. Examples of collaborative tasks include group writing and creating an ID model.

Community

A virtual learning community, as described in the introduction, is one of the ultimate goals of the core courses. The three levels of interactions can be compared by several characteristics, as in the table below.

	Discussion	**Cooperation**	**Collaboration**
Learning	Information transmission	Knowledge transmission	Knowledge generation
Inquiry	Individual inquiry	Delegation of tasks	Common inquiry
Decision-making	Agree to disagree	Vote (majority rules)	Social negotiation to

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			consensus
Goals/agendas	Multiple goals/ multiple agendas	One goal/ multiple agendas	One goal/ one agenda
Accountability	Individual accountability	Individual accountability	Group accountability
Learning relationship	Complete independence	Partial interdependence	Complete interdependence

Description of IST Core

The term "Core" is used in the IST department to denote four courses that all graduate students take in their first year in the program. Traditionally R511 (2 credits), R521/522 (4 credits), R580 (1 credit) are offered in the Fall term; R561 (3 credits) is offered in the Spring. It is usually the case that the new students (both Masters and Doctoral) take these classes as a group; they form a cohort that goes through at least the first year of courses together. The cohort identity is important to the IST program, and it is something that will be actively cultivated in the online Masters program. Tangential to the cohort identity is the community-building that is undertaken to integrate new students into the IST program. The social aspect of the community is nurtured through happy hours, the IST picnic in the fall and the Follies show in the spring, and informal pairing new students with old ones. Academically, the IST community is built through the identity of the Rookie cohort, through the rookies taking non-Core classes (R547, Y520, etc.) with upper year students, through rookie interaction with upper year AIs in Core and non-Core classes, etc. The IST department is also very much linked to its alumni, through alumni presentations in R580 (Grads with Gigs) and networking at conferences.

The pedagogy is rooted in project-based learning and team-based work. Much of the learning is hands-on, and students often work with real-world clients. There is a focus on an integrated curriculum and many of the courses are team-taught. The different research areas of the faculty (for e.g., corporate vs. higher education vs. K-12) expose all students to multiple academic perspectives. The international nature of the program (approximately one-third of the students are non-U.S. citizens) exposes all students to different ways of learning and working. Because of the content, there is an emphasis on technological competence, although the skill levels of both entering and graduating students vary immensely. Although the use of technology in education is important to IST, technology is a means, not an end, and its use is firmly rooted in pedagogy.

The associations that IST has with other departments, including Educational Psychology, Language Education, the Kelly School of Business, the School of Library Science, etc., contribute to an integrated and interdisciplinary academic environment. Most of these departments offer online courses that can be used by Distance Masters students as electives.

Core Instructional Strategies and Rationales

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	Strategies	Rationale
✓		✓	✓	✓	✓	Students participate in a face-to-face orientation on campus.	Face-to-face interactions allow to people to create strong initial bonds, which will lead to a greater sense of community right from the beginning.
✓	✓			✓	✓	Students will learn about online communication, including rules of netiquette	Online communication is vastly different from more traditional forms of communications (Black, 1995).

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	Parti	Strategies	Rationale
	✓			✓	✓	Students will undergo training in using SiteScape Forum, e-mail, majordomo creation, basic web searches, and MS Word for collaborative writing purposes.	To help reduce barriers to effective learning and establishing social relationships, participants should be given the opportunity to build confidence and competence with the distance education process and supporting technologies (IDE, 2.2).
		✓	✓	✓		Students will post photos of in SiteScape Forum at Orientation.	Connecting people's names and faces is a first big step to forming bonds.
✓	✓		✓	✓	✓	Students will participate in a content-based group project that requires that they negotiate the exact content.	People will form strong personal and academic bonds through shared adversity (Ruhleder, 1999).
			✓	✓		Students will be required to eat lunch as a group two days during Orientation.	People who have a social connection to the group will work better together (Palloff & Pratt, 1999).
			✓	✓		Students will be given the opportunity to participate in at least two evening social activities.	People who have a social connection to the group will work better together (Palloff & Pratt, 1999)
		✓			✓	First posting should be a non-graded/non-credited assignment (e.g. biography).	Students need non-threatening, interesting ways to begin creating online community (Funaro, 1999).
✓	✓	✓	✓	✓	✓	Create an online café that will serve as a non-course-specific conversation area to encourage off-task communication.	People need distinctions between work and play (Palloff & Pratt, 1999).
		✓	✓	✓	✓	Encourage instructor and distance mentors to participate in social interactions, especially in the early stages of the course.	Social interactions between and among learners enrich the learning community and should be supported in the instructional design of the course (IDE, 2.5).
		✓	✓	✓	✓	Students will be encouraged to share, in the online café, information about their non-academic lives, for example, offering mutual support in term of how they are keeping up with their job and school schedule. Students should be encouraged to offer successful strategies to the class.	Reciprocity and help are two important hallmarks of community. Students who take an interest in each other's well being, both academic and social, will have more of a support system of peers than those who do not (Wellman & Gulia, 1999).

R511 Section

Description of R511 (from course syllabus)

R511, Instructional Technology Foundations I, is a two-credit course that has historically been offered each fall semester. This course is required by all IST Masters students and is typically taken concurrently with R521/522, Instructional Design and Development, and R580, IST Colloquium. It is team-taught by two faculty members and one graduate assistant who has taken the course.

The overall objective of this course is to provide a comprehensive introduction to the field and profession of Instructional Technology (IT). Since most entering IST students come from fields other than instructional technology, R511 gives newcomers a sense of history and an explanation of how the components of the field fit together. There is a particular emphasis on the evolution of the "big ideas" of the field.

In the onsite version of R511, class meetings occur once per week in 2-hour sessions. Directed readings compiled in a course packet are provided as practical resources to support assignments and class discussion activities in the course. Most class periods are divided into two portions: 1) During the first hour, each of the three instructors facilitates a group discussion among 15-20 students about assigned readings. 2) The remaining portion of the class time is devoted to further lecture and clarification about topics contained in the readings.

Students are graded according to participation in class discussion, personal synthesis and reflection (as noted in weekly minute-papers collected at the end of each class), three individual written essays (one team-based, two individual), and a final exam or written essay.

R511 Instructional Strategies and Rationales

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	**Strategies**	**Rationale**
					✓	A fundamental element for success for the distance students is an understanding of the key expectations •how much time the course will require •the level of performance that is expected of them •the demands that participating in the core will have on their time.	Students, but especially students learning at a distance, need to have expectations, assumptions, deadlines, etc., made explicit and kept clear (Palloff & Pratt, 1999). Understanding and respecting expecta-tions for participation and performance will be critical to the students' success. Taking Core online will be more demanding than doing it face-to-face.
	✓	✓		✓	✓	Instructors will assign discussion roles (facilitator, summarizer, devil's advocate, etc.) to encourage shy members and force students to think in different ways about the material and about the discussion of the material.	Students should be challenged to engage the material from different perspectives; different roles improve learner-learner interaction and improve learner-material interaction.
	✓		✓		✓	Students will be expected to take part in regular peer reviews by critically evaluating each other's papers.	It is important to develop a critical eye towards other community members' work.
✓	✓				✓	Each week, someone from each group will summarize their group's discussion and post the results for the other groups to read.	Bringing from small groups to the larger group provides for more viewpoints and better discussion.
	✓		✓		✓	Students will be divided into 3-4 small groups for discussion of	Small groups facilitate better discussion (Hiltz, 1998) for

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	**Strategies**	**Rationale**
						readings and course projects.	learner-material interaction.
✓		✓			✓	Students will fill out weekly "1-minute evaluation" web form, to instructor only. Possible topics include what you liked/disliked about the week's work, how you can transfer this knowledge to your work, and generally how you are feeling.	To better assimilate and process what they have learned, students require a forum to critically reflect on the material and on themselves as learners (Palloff & Pratt, 1999). Keeping in touch with the professor improves learner-faculty interaction.
	✓		✓		✓	Instructors will require high-quality online interactions with peers and discussions of readings by making a portion of the grade dependent on it. (We recommend at least 25%).	Effective learning environments should provide frequent and meaningful interactions among learners. (IDE, 2.1) Good practice encourages cooperation among students (Chickering & Gamson, 1987).
	✓			✓	✓	Instructor and/or mentor will model ways to produce lively, constructive discussion: questions should be open-ended, but focused on students' interpretation of the text.	One of the best ways to keep discussion on topic and students motivated is to participate actively in the conversation (Beaudin 1999).
✓	✓	✓			✓	Instructor will point out excellent discussion, postings, interactions, etc. of other students to continually promote high expectations and model good interaction.	Good practice encourages prompt feedback (Chickering & Gamson, 1987). Faculty-learner interaction improved by attentive professor.
✓			✓	✓		As needed, instructor will revisit netiquette and general interaction issues, and stresses the importance of interacting in a respectful way. Have the community develop group norms based on emergent issues.	Social negotiation leads to the creation of a safe space, which is essential for learning (Palloff & Pratt, 1999).
					✓	Students will be expected to check SiteScape Forum and e-mail every two days and post	Because of the nature of the evolving discussion, students should be constantly engaged in

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	Parti	Strategies	Rationale
						quality contributions at least twice a week. Participation points will be calculated based on these postings.	the course, without any lengthy absences from discussion. (Caldwell & Taha, 1993)
✓		✓	✓		✓	The instructor/AI should make contact with students who are not actively participating to find out why and address their concerns.	Students need to actively feel like they're part of the community, and that the instructor is interested in their well-being, academic or otherwise (Palloff & Pratt, 1999).
	✓		✓		✓	Students will work together at all three levels of interaction: •Discussion •Cooperation •Collaboration	In order for a newly-formed cohort to move to community, they must change the quality of their interactions. The community should move toward successful use of collaboration, in addition to the continued use of group discussions and cooperative tasks.

R511 Assignment Specifications

Based on the existing assignments for R511, we have developed a set of projects and assignments that will both address the traditional content of the course, and build community based on the discussion, cooperation, and collaboration model. Where we realize that collaboration is a more rich form of thinking and working together, we also emphasize the necessity for students to work at all three levels of interaction throughout the course.

Discussion

•At the beginning of the semester, students will be divided into readings discussion groups of 3-4 people. For purposes of community and continuity, they will remain in these groups throughout the semester.

•In SiteScape Forum, a team will be created for each readings discussion group. The group will manage that space, and can create folders for each week's readings if they so choose.

•The students will be expected to discuss the week's readings in their respective folders. Each student should post at least twice each week.

•The role of facilitator in each discussion group will rotate from week to week. The facilitator must start the conversation, and engage group members to participate.

•The role of summarizer in each discussion group will rotate from week to week. At the end of the week, the summarizer must condense the group's main discussion points, and post them to the class forum (outside the team space).

•There will be a separate folder in SiteScape Forum for discussion of the week's lecture or class activity. These posting requirements will be determined at a later time, dependent on the format of the course lecture material.

Cooperation

"Letter Home" Paper

Students will review each other's papers in formative stages. For the "letter home" assignment, students will post outlines and rough drafts by set deadlines, and a selected group of peers (ideally from outside their reading group) will have to read and give feedback on them. The rationale for a number of small deliverables leading to the final paper is that distance students traditionally need regular deadlines and prompt feedback.

Final Exam Study Guide

Students can still help each other out on breaking down the study guide and elaborating on certain sections of it. This could be left open for students to determine, just as in the traditional R511 class. Simply make the suggestion to the students that they may want to work together on fleshing out the study guide, and leave it to them to decide how they want to do it.

Collaboration

ID Model Paper

The students will collaborate on the ID model paper as in the traditional R511 class (using their reading discussion teams as the groups). In the distance version, however, it will be critical that this process be divided into small deliverables. For instance, the students might be required to break down the task into the following deadlines:

- *Week One*: Each group member must post initial ideas of possible models to evaluate or create. This is not in any formal structure – just a brain dump. Each group member must read and respond to the discussion.
- *Week Two*: Group must decide on a model and begin explicating the model and describing its strengths/weaknesses. All group members should be posting during this week.
- *Week Three*: Someone in the group should summarize the discussion into a paper outline. Another group member should develop a paper draft. One or two group members should make suggested changes and revisions. The final group member should write the final draft and post it.

"ism" Debate

Students will participate in group debates revolving around behaviorism, cognitivism, and constructivism. Ideally, students will be placed into 3 groups that are different from their reading groups. Each group will be assigned one of the "isms" to represent in the debate. Here, a proposed timeline for the debate:

- *Week One*: Individuals will write an informal short paper (one page – perhaps even as a bulleted list) highlighting the major strengths of their "ism" as it applies to distance education courses and will post it for their teammates. Next, the team will enumerate possible rebuttals from the other groups and responses to those arguments. The first week's discussion and postings will all take place inside a new folder established for that team.
- *Week Two*: One student from each group will post an argument about why their position is the best to a debate folder open to the whole class. Each group will respond to each of the other groups.
- *Week Three*: Debate will continue.
- *Week Four*: Each individual will write a brief reflection on how their opinion changed throughout the debate.

Checklist for R511 Instructor/Mentor

Orientation

- ❑ Attend Sunday night dinner with new DE students.
- ❑ Participate in 2-hour R511 class welcome session.

Beginning of Semester

- ❑ Create teams in SiteScape Forum for each readings discussion group. Using a naming structure like jewels (Opal team, Ruby team, etc.) is an easy identifying factor.
  - Divide students into the groups evenly. Make sure the instructor and GA are listed as members of all teams.
- ❑ In SiteScape Forum, create a Discussion & Document Forum entitled "R511 Lecture and Class Activity Discussion."
- ❑ In SiteScape Forum, create a Discussion & Document Forum entitled "R511 Resources & Tidbits"
- ❑ Create a class majordomo.

Weekly

- ❑ Check that all class members have posted at least twice about the readings.
  - If not, make decision about contacting that person via e-mail.
- ❑ Check that all class members have posted about the lecture/class activity.
  - If not, make decision about contacting that person via e-mail.

- ❑ Post some comments to the Online Café. This could be
  - News stories
  - Responses to other students
  - Encouragement
  - Personal comments
  - IST/DE news
- ❑ Reply to at least 2 postings a week, to encourage students to post thoughtful responses and to show that you are present and actively following the discussions.

Before the "ism" Project

- ❑ In SiteScape Forum, create the following three teams: Behaviorism, Cognitivism, and Constructivism.
  - Divide students equally among the three teams. Make sure the instructor and GA are listed as members of all teams.

Before the "Letter Home" Paper

- ❑ In SiteScape Forum, create the following five teams: Peer Review Group 1, Peer Review Group 2, Peer Review Group 3, Peer Review Group 4, and Peer Review Group 5.
  - Divide students equally among the five teams. Make sure the instructor and GA are listed as members of all teams.

R521/522 Section

Description of R521/522 (from course syllabus)

R521/522, Instructional Design and Development, is a four-credit course that has historically been offered each fall semester in an onsite format. This course is required by all IST MS students and is typically taken concurrently with R511, Instructional Technology Foundations I, and R580, IST Colloquium. It is team-taught by at least two faculty members and one or two graduate assistants who have taken the course themselves.

Major content and experience objectives of R521/522:

- Knowledge of instructional design principles
- Knowledge and application of the ADDIE model of instructional design and development
- Understanding and application of simple formative evaluation processes
- Ability to recognize and employ fundamental principles and experiences in team-based approach to project work

Pedagogical methods used in R521/522:

- Task-oriented learning through "authentic" projects
- Diverse, team-based project groups
- Mentor/coach-based instruction for project team support
- Structured timeline of deadlines and deliverables
- Independent learning, i.e., students take responsibility for their own learning
- Assignments with specific criteria that engage students in learning specific course content, with leeway given for students to identify their own topics

Most of the learning in the course occurs within the context of projects and situations similar to those that instructional designers encounter in professional work. Projects are sequenced such that the processes and principles learned in the first ones provide foundation of understanding and competence for progressively more complex ones that follow. This progression of increasingly elaborated projects continues through the academic year into R561, Evaluation and Change Management, and is intended to carry on throughout the student's academic experiences in completing the IST MS program.

In the onsite version of R521/522, class meetings occur twice per week in 2.5 -hour sessions. Class sessions involve one or more of a variety of activities, including lectures or presentations about specific topics, readings discussions, project group meeting time, group project presentation, or hands-on design activities. Directed readings compiled in a course packet are referenced as practical resources to support projects and class discussion activities in the course.

The instructors believe that people learn best when they are highly motivated and actively engaged in learning tasks, that learning is most useful when it is directly related to learner needs. Thus, students are expected to take responsibility for their own learning. The course begins with a fair amount of guidance from the instructors, in

terms of what information to access and how to facilitate personal learning, then gradually decreases that guidance to require students to actively seek resources on their own to perform the assigned tasks.

Major projects in R521/522 are completed by groups of three students, each mentored by an assigned instructor "coach." To perform most satisfactorily in the course, students must spend many hours per week outside of class developing and completing these projects. At the completion of a project, each member of a given group is awarded the same grade (a "group grade") as his/her teammates. Approximately twenty percent of that grade is awarded for the deliverable produced in the project (e.g., the instructional tool developed and a design report), whereas the remaining portion of the grade is awarded according to the way members worked within the team setting. Some students come into the program with extensive background in true teamwork, but most do not. Thus, the instructors devote a portion of instructional time early in the semester toward preparing students for the team experience. Throughout the duration of each project, group coaches continue to offer advice and guidance for the team process.

R521/522 Instructional Strategies and Rationales

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	**Strategies**	**Rationale**
	✓					Learners will be divided into 3-4 groups for discussion of readings and course projects.	Small groups facilitate better discussion. (Hiltz, 1998)
✓	✓		✓		✓	Provide criteria that define appropriate course topics, leaving room for choice and opportunities to leverage work-related projects as course projects. • Learners select a topic and procedure for project. • Each team selects 4 readings to read and summarize for the whole class (for discussion)	In order to build community, learners need ownership. (Schwier, in press)
✓	✓				✓	Each week, someone from each group will summarize their group's discussion and post the results for the other groups to read.	Bringing from small groups to the larger group provides for more viewpoints and better discussion.
	✓		✓		✓	Students will be divided into 3-4 small groups for discussion of readings and course projects.	Small groups facilitate better discussion (Hiltz, 1998) for learner-material interaction.
	✓		✓		✓	Instructional activities will require the learner to actively participate in the acquisition and processing of educational content. • Team-based authentic projects where the learners learn by doing. • Discussing readings online and	To better assimilate and process what they have learned, students require a forum to critically reflect on the material and on themselves as learners (Palloff & Pratt, 1999). Keeping in touch with the

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	**Strategies**	**Rationale**
						role-playing. • Require high-quality online interactions with peers and discussions of readings by making a portions of the grade dependent on it (25% recommended) • Groups will be responsible for posting some of their work in progress (e.g., each group posts a description of a different aspect of ADDIE). • Instructor should use open-ended questions to encourage dialogue. • Ask learners to provide URLs that enhance learning.	professor improves learner-faculty interaction.
	☑				☑	Instructor will phone each learner before class begins. (Spear & Bruce, 1997)	One-on-one verbal communication between learner and instructor solidifies relationship.
	☑				☑	Establish a virtual office hour: one hour where instructor will be available for online chats, office phone calls, or e-mail. Inform learners of the faculty member's expected e-mail or voicemail response time, e.g., within 24 hours, twice a week, etc. (Spear & Bruce, 1997) (Spear & Bruce, 1997)	Students like to know the professor is available at a particular time to address e-mail concerns.
				☑	☑	Instructor will be proactive, following up on the learner who is not participating in chats, discussions, etc.	In the distance format, it is easy for students to lose touch with the class and slowly drop out. Active intervention from the instructor can lessen attriction.
☑	☑		☑	☑		Conduct a phone conference with each team at least once during the development of each project.	Verbal communication between the team and instructor solidifies relationship and makes for easier clarification.
☑	☑				☑	Invite other professors to lead discussions (Davies and Reigeluth on concept learning) where learners can interact	Students will appreciate input from experts in the field. The will feel less isolated from the rest of the department when they can

Ownership	Know. Gen.	Ind. Identity	Shared Iden.	Social Inter.	*Parti*	**Strategies**	**Rationale**
						directly with experts to deepen understanding.	interact with other instructors.

R521 Assignment Specifications

Based on the existing assignments for R521, we have developed a set of projects and assignments that will both address the traditional content of the course and build community based on the discussion, cooperation, and collaboration model. The students will collaborate on production projects, discuss readings or lecture topics, and reflect on activities and experiences throughout the course. While we realize that collaboration is the richest form of thinking and working together, we also emphasize the necessity for students to work at all three levels of interaction throughout the course.

Discussion

Readings

Discussion activities centered around the course's major themes (e.g., usability, design, evaluation).

- At the beginning of the semester, students will be divided into readings discussion groups of 5 people (different from those in their project groups). For purposes of community and continuity, they will remain in these groups throughout the semester.
- In SiteScape Forum, a team will be created for each readings discussion group. The group will manage that space, and can create folders for each week's readings if they so choose.
- The students will be expected to discuss the assigned readings in their respective folders. Each student should post at least twice each week.
- The role of facilitator in each discussion group will rotate from assignment to assignment. The facilitator must start the conversation, and engage group members to participate.
- The role of summarizer in each discussion group will rotate from assignment to assignment. At the end, the summarizer must condense the group's main discussion points, and post them to the class forum (outside the team space).

Cooperation

Group projects

- At the beginning of each project, students will be divided into groups of three. Each group will work collectively to complete its own project. A team "coach" (an instructor or graduate assistant) will be assigned to each group to offer advice and guidance for the team process.
- In SiteScape Forum, a team will be created for each project group (including the course instructors and mentors). The group will manage that space.
- Groups will be required to post all team meeting summaries and other artifacts of their team processes on the forum.

Collaboration

Group projects For each project, the team will be intentionally diverse in gender, nationality and/or job background as much as possible to encourage multiple points of view.

- Projects will be assigned group grades, a large portion of which is assigned to the "group process."
- Give project rubrics, teams will be encouraged to brainstorm possible topics and come to consensus to identify their own topics for projects.
- Teams will engage in formative peer reviews of each others' projects and materials for projects throughout the course.
- Lectures and course topics will be presented by different instructors throughout the course, providing a model of collaboration for students.

Checklist for R521 Instructor/Mentor

Orientation

- ❑ Attend Sunday night dinner with new DE students.
- ❑ Coordinate a team-based project that emulates the required peer interaction and interdependence and time-limited working tensions of R521 production projects.
- ❑ Post expectations (time, participation, assignments, dates)

Beginning of Semester

- ❑ Create teams in SiteScape Forum for each readings discussion group.
  - o Divide students into the groups evenly. Make sure the instructor and GA are included as members of all teams.
- ❑ In SiteScape Forum, create a Discussion & Document Forum entitled "R521 Lecture and Class Activity Discussion."
- ❑ In SiteScape Forum, create a Discussion & Document Forum entitled "R521 Resources & Tidbits"
- ❑ Create a class majordomo listserv and direct all class members to subscribe to it.

Weekly

- ❑ Post some comments to the Online Café. This could be
  - o News stories
  - o Responses to other students
  - o Encouragement
  - o Personal comments
  - o This week in IST
  - o Post reflection questions each week

Beginning of Each Project

- ❑ Create teams in SiteScape Forum for each project group.
  - o Divide students into the groups evenly. Make sure the instructor and GA are included as members of all teams.
- ❑ Direct each team to construct and post its own individualized strategies and timeline for conducting the team process and completing its project.

Throughout Project

- ❑ Check that each project team is posting evidence of cooperative work on project at least once per week.
  - o If not, make decision about contacting that group via e-mail.
- ❑ Reply to at least 1 or 2 postings a week per group, to encourage students to post thoughtful responses and to show that you are present and actively following the discussions
- ❑ Check that all team members are participating at least once every two weeks within their own project teams

End of Project

- ❑ Review reflection essays from each team member about lessons learned from the production and team processes
- ❑ Collect peer grading of team members' participation within each team

Evaluation

The final step in the creation of a learning community in these courses is to evaluate whether such a community has formed and, if so, in what ways the community aspect has contributed to learning. We are basing our strategies for evaluating the success of community-building in these courses on Palloff & Pratt's (1999) indicators that an online community has been forming:

- Active interaction involving both course content and personal communication.
- Collaborative learning evidenced by comments directed primarily student to student rather than student to instructor.
- Socially constructed meaning evidenced by agreement or questioning, with the intent to achieve agreement among students.
- Sharing of resources among students

- Expressions of support and encouragement exchanged between students, as well as willingness to critically evaluate the work of others. (p. 32)

The course evaluations will take two forms: Formative evaluations are undertaken throughout the course so that necessary adjustments in course delivery and activities can be identified and made. Summative evaluations are performed at the conclusion of the course to measure final learning outcomes and student satisfaction. Both forms provide fundamental indicators of the overall success of the course and its participants in meeting the initially stated objectives. Palloff & Pratt recommend employing evaluations over three distinct elements of a online course: student performance and learning, effectiveness of the course in supporting student learning objectives, and overall student experiences of the students in working in an online environment. For our purposes of assessing community formation, the emphasis on student performance is most the most important factor on which to focus.

We have stated already that two key indicators that the evolution of a community has occurred are evidence of participants accepting ownership of the community and realizing a shared identity. The metaphor of scaffolding activities and course strategies as mechanisms to foster community implies that the instructor provides models and activities to course members through which they exercise community-like tasks and interactions. These scaffolds are erected as temporary measures to support the desired behavioral outcomes until observed behavior indicates they are no longer used or needed, then they are gradually removed. Concurrently, formative evaluation that measures indicators of the extent to which online community is occurring becomes the key factor in determining the necessity and lifespan of each scaffolding device.

Suggested methods for formatively assessing the level of online community throughout the duration of the courses are as follows:

- Continually monitor the amount, type and effectiveness of discussion in all media, particularly student-to-student discussion
- Administer periodic interviews and web-based questionnairesto students to gather qualitative feedback about reactions to the level of community they are experiencing and its usefulness to their learning
- Look for evidence within all communication media of resource sharing and/or inter-community encouragement or support
- Compare progression of reflective essays of students to identify evolution of self-assessments that indicate personal commitment to the community or deepening of learning and thought about key issues discussed among members

We do not anticipate that a mature community will have been generated from this one semester alone. However, we do expect that the R521 and R511 experiences of these students will create a solid foundation of an infant community that will continue evolving throughout their career in the IST DE MS program. Summative evaluation in the context of assessing community building is useful for determining the overall effectiveness of the online community environment on the students' experiences both during these courses and in future ones.

Suggested methods of summative evaluation are as follows:

- Compare pre-and post-course attitudes of students regarding confidence with working collaboratively with a distributed or online project team
- Compare pre- and post-course opinions of students regarding their comfort levels with and reactions to collaborative projects
- Assign a final reflective essay in which students describe a personal action plan for applying the experiences and knowledge gained through the course, specifically those relating to collaboration and communities
- Perform longer-range (e.g., 2-3 months later) follow up interviews and surveys with students that engage them in reflection on the impact of community and collaboration on courses taken after R521 and r511

Finally, we intend these strategies of evaluating community building in R521 and R511, although holistic in spirit, merely as a framework on which more specific and precise assessments can be constructed. We believe deeper exploration of success factors in fostering online community would be a very fertile topic for further research and warrants further investigation.

Questions for Further Research

Beyond the evaluation of the success or failure of community in the Fall 2000 Distance Masters Core, there are other topics worthy of research.

- What are some valid measures of community development?
- If community formed, what was its effect on the learning?
- How can learners be motivated to take part in virtual academic or social community activities?

- What are special features of "forced community" like the Masters cohort?
- What is the expected/observed life cycle of the Distance Masters learning community?
- How does this community develop and maintain its history?
- Should the Distance community be integrated with the residential graduate community? If so, in both academic and social ways? If so, how can this be accomplished?
- How can the community best be mentored?
- What are the different roles for instructors, graduate assistants, volunteers, upper-year IST students, etc?
- What communication/collaboration tools foster the development of a learning community?
- What are the best practices for using existing communication tools in distance education?
- What tool features lend themselves to different aspects of collaboration and community-building?
- How appropriate were the tools chosen for Fall 2000 in terms of collaboration and community formation?

Conclusion

Having determined that richer learning takes place within the context of a learning community, this report provides background descriptions of characteristics of community and, more specifically, a virtual learning community. We discuss the goal of moving a cohort to a learning community through scaffolding activities rooted in the communication formats of discussion, cooperation, and collaboration.

The report then treats the Core classes in three separate sections: Core (principally orientation and the online café), R511, and R521/522. The courses are described, instructional strategies and rationales are presented, possible assignments are detailed, and an instructor checklist is provided.

Finally we thought it necessary to determine some strategies to evaluate a) whether community has formed within the cohort, and b) in what ways the community contributed to deeper learning. We also provide some possible topics for further study.

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